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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PAN, JOSEPH T

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,267	<b>Applicant(s)</b> BRIZEK ET AL.	
	<b>Examiner</b> JOSEPH PAN	<b>Art Unit</b> 2435	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-15,17-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-15,17-20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. Applicant's response filed on October 23, 2008 has been carefully considered. Claims 1, 7, 9, 15, and 20 have been amended. Claims 1, 3-9, 11-15, 17-20 and 22 are pending.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-9, 11-15, 17-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (U.S. Patent No. 7,069,439 B1), hereinafter "Chen", in view of Nakayama et al. (U.S. Pub. No. 2004/0147251 A1), hereinafter "Nakayama", and further in view of Hino et al. (U.S. Pat. No. 7,424,611 B2), hereinafter "Hino".

#### Referring to claims 1, 7, 15, 20:

i. Chen teaches:

A method, comprising:

dynamically generating a first set of integrity information for a first processing system by generating said first set of integrity information for an application using a cryptographic algorithm (see figure 5, elements 530 'generate digest', 570 'compare metrics'; column 4, line 59-column 5, line 2; column 8, lines 4-16; and column 11, lines 5-16 of Chen);

sending said first set of integrity information to a second processing system (see

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figure 5, elements 535 'sign & return digest' of Chen); and

generating an attestation value for said first processing system by said second processing system using said first set of integrity information and a dynamic attestation module connected to said second processing system prior to execution of said application by said first processing system (see column 11, lines 5-16, '...compares the computed integrity metrics, which it extracts from the challenge response, with the proper platform integrity metric, which it extracts from the certificate.>'; and figure 5, element 590 'establish secure communication', of Chen, emphasis added).

Chen discloses dynamic authentication of the platform and application (see column 8, lines 4-16, particularly "Other know processes, for example virus checkers, will typically be in place to check that the operating system and **application program** code has not been subverted", of Chen, emphasis added). However, Chen does not specifically mention selecting an application from a plurality of applications.

Chen discloses generating set of integrity information for a processing system during boot operation (see column 7, lines 19-21 'During the secure boot process, the trusted device 24 acquires an integrity metric of the computing platform 10.', of Chen). However, Chen does not specifically mention the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application.

ii. Nakayama teaches a portable terminal wherein Nakayama discloses selecting an application from a plurality of applications (see figure 5, element 222 'service identifier area' [i.e., a plurality of applications]; page 7, paragraph [0102], lines 9-12 "The service identifier area 222 stores identifiers of services (e.g., "0001", "0002", "0003",...) for which the corresponding value entities in the value entity area 221 are used"; and paragraph [0098], lines 7-9 "or pull-type transmission in which the store server 30 transmits the application in response to an active transmission request from the portable terminal 20", of Nakayama).

On the other hand, Hino teaches a authentication system wherein Hino discloses the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application (see column 2, lines 5-11 'Authentication may be performed during any period when inoperativeness of unauthenticated programs is guaranteed. Therefore, the authenticator accepting period is not limited to a boot period which will be described below. That is,

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authentication is not limited within a period starting from generation of a system reset, and not limited within a period ending at activation of an OS.'; and column 3, lines 37-59, of Hino, emphasis added).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Nakayama into the method of Chen to select an application from a plurality of applications for authentication.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hino into the method of Chen to use the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Nakayama into the system of Chen to select an application from a plurality of applications for authentication, because Chen teaches dynamic authentication of platform and applications (see column 8, lines 4-16 of Chen), and Nakayama teaches selection an application from a plurality of applications (see ii above). Therefore, Nakayama's teaching could enhance Chen's system by providing more flexibility.

The ordinary skilled person would have been motivated to have applied the teaching of Hino into the system of Chen to use the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application, because Chen teaches dynamic authentication of platform and applications (see column 8, lines 4-16 of Chen), and Hino teaches using the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application. Therefore, Hino's teaching could enhance Chen's system by providing security.

Referring to claims 3, 22:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 1 above). Chen further discloses:

retrieving a second set of integrity information for said first processing system (see column 11, lines 5-16, '...compares the computed integrity metrics, which it extracts from the challenge response, with the proper platform integrity metric, which it extracts from the certificate.', of Chen, emphasis added);

comparing said first set of integrity information with said second set of integrity

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information (see column 11, lines 5-16 of Chen); and

generating said attestation value in accordance with said comparison (see column 11, lines 5-16 of Chen).

Referring to claim 4:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 1 above). Chen further discloses the encryption key (see column 4, lines 56-58 of Chen).

Referring to claims 5, 19:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 1 above). Chen further discloses the authentication (see column 7, lines 21-26 of Chen).

Referring to claim 6:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 1 above). Chen further discloses the decryption (see column 7, lines 21-26 of Chen).

Referring to claim 8:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 7 above). Chen further discloses the first and the second process (see figure 5, 'trusted device', 'user' [i.e., smart card] of Chen).

Referring to claim 17:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 15 above). Chen further discloses retrieving a second set of integrity information (see column 11, lines 5-16 '...with the proper platform integrity metric, which is extracts from the certificate.', of Chen).

Referring to claim 18:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 15 above). Chen further discloses comparing the first set of integrity metric with the second set of integrity metric (see column 11, lines 5-16 'compares', of Chen).

Referring to claim 9:

- i. Chen teaches:

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A method, comprising:

a first processing comprising a plurality of applications (see figure 5, elements 530, 535, 540; column 4, line 59-column 5, line 2; and column 11, lines 5-16 of Chen);

a second processing system to connect said first processing system (see figure 5, element 'user' [i.e., smart card] of Chen); and

a dynamic attestation module to connect to said first and second processing systems, said second processing system to perform dynamic attestation for one of said applications to be executed by said first processing system using said dynamic attestation module, wherein said dynamic attestation module comprises an integrity module to dynamically generate a first set of integrity information for said application by generating said first set of integrity information for said application using a cryptographic algorithm system prior to execution of said application by said first processing system (see column 11, lines 5-16, '...compares the computed integrity metrics, which it extracts from the challenge response, with the proper platform integrity metric, which it extracts from the certificate.'; and figure 5, element 590 'establish secure communication', of Chen, emphasis added).

However, Chen does not specifically mention the antenna and the transceiver.

Chen discloses dynamic authentication of the platform and application (see column 8, lines 4-16, particularly "Other know processes, for example virus checkers, will typically be in place to check that the operating system and **application program** code has not been subverted", of Chen, emphasis added). However, Chen does not specifically mention selecting an application from a plurality of applications.

Chen discloses generating set of integrity information for a processing system during boot operation (see column 7, lines 19-21 'During the secure boot process, the trusted device 24 acquires an integrity metric of the computing platform 10.', of Chen). However, Chen does not specifically mention the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application.

ii. Nakayama teaches a portable terminal wherein Nakayama discloses the antenna and the transceiver for communicating with other servers (see figure 3, element 'A' [i.e., antenna]; and figure 11, elements 23 'application receiver', element 27 'value entity transmitter', of Nakayama).

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Nakayama further discloses selecting an application from a plurality of applications (see figure 5, element 222 'service identifier area' [i.e., a plurality of applications]; page 7, paragraph [0102], lines 9-12 "The service identifier area 222 stores identifiers of services (e.g., "0001", "0002", "0003",...) for which the corresponding value entities in the value entity area 221 are used"; and paragraph [0098], lines 7-9 "or pull-type transmission in which the store server 30 transmits the application in response to an active transmission request from the portable terminal 20", of Nakayama).

On the other hand, Hino teaches a authentication system wherein Hino discloses the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application (see column 2, lines 5-11 'Authentication may be performed during any period when inoperativeness of unauthenticated programs is guaranteed. Therefore, the authenticator accepting period is not limited to a boot period which will be described below. That is, authentication is not limited within a period starting from generation of a system reset, and not limited within a period ending at activation of an OS. '; and column 3, lines 37-59, of Hino, emphasis added).

iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Nakayama into the method of Chen to use an antenna and a transceiver for communicating with other servers.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Nakayama into the method of Chen to select an application from a plurality of applications for authentication.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hino into the method of Chen to use the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application.

iv. The ordinary skilled person would have been motivated to have applied the teaching of Nakayama into the system of Chen to use an antenna and a transceiver, because Chen teaches a method for performing dynamic attestation via integrity metric (see claim 1 above), and Nakayama teaches utilizing integrity measurement in a portable terminal (see e.g. figure 11, element 20 'integrity measurement part' of Nakayama). Therefore, Nakayama's teaching could enhance



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Chen's teaching by expanding Chen's method for performing dynamic attestation into a portable device.

The ordinary skilled person would have been motivated to have applied the teaching of Nakayama into the system of Chen to select an application from a plurality of applications for authentication, because Chen teaches dynamic authentication of platform and applications (see column 8, lines 4-16 of Chen), and Nakayama teaches selection an application from a plurality of applications (see ii). Therefore, Nakayama's teaching could enhance Chen's system by providing flexibility.

The ordinary skilled person would have been motivated to have applied the teaching of Hino into the system of Chen to use the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application, because Chen teaches dynamic authentication of platform and applications (see column 8, lines 4-16 of Chen), and Hino teaches using the processing system that has completed trusted boot operation to verify integrity of an application prior to execution of the application. Therefore, Hino's teaching could enhance Chen's system by providing security.

Referring to claims 11:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 9 above). They further disclose retrieving a second set of integrity information (see column 11, lines 5-16 '...with the proper platform integrity metric, which is extracts from the certificate.', of Chen).

Referring to claims 12:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 9 above). They further disclose comparing the first set of integrity metric with the second set of integrity metric (see column 11, lines 5-16 'compares', of Chen).

Referring to claims 13:

Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 9 above). They further disclose the authentication (see column 7, lines 21-26 of Chen).

Referring to claims 14:

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Chen, Nakayama, and Hino teach the claimed subject matter: a method for performing dynamic attestation (see claim 9 above). They further disclose disabling access (see column 11, lines 5-16 ‘...the whole process ends in step 580 with no further communications taking place’, of Chen).

### ***Response to Arguments***

4. Applicant’s arguments, filed on October 23, 2008, have been fully considered. The newly amended independent claims now contain the claim limitation "During boot operation for said first processing system", "that has completed trusted boot operation to verify integrity of said application prior to execution of said application by said first processing system", etc. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hino.

### ***Conclusion***

5. Applicant’s amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Pan whose telephone number is 571-272-5987.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached at 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

/Joseph Pan/

Examiner, Art Unit 2435

January 9, 2009

/Kimyen Vu/

Supervisory Patent Examiner, Art Unit 2435